

Figure 1: Evacuated Gas Sampling Pneumatic System (version 1) which resulted in fast signal rise kinetics and a relatively slow recovery time

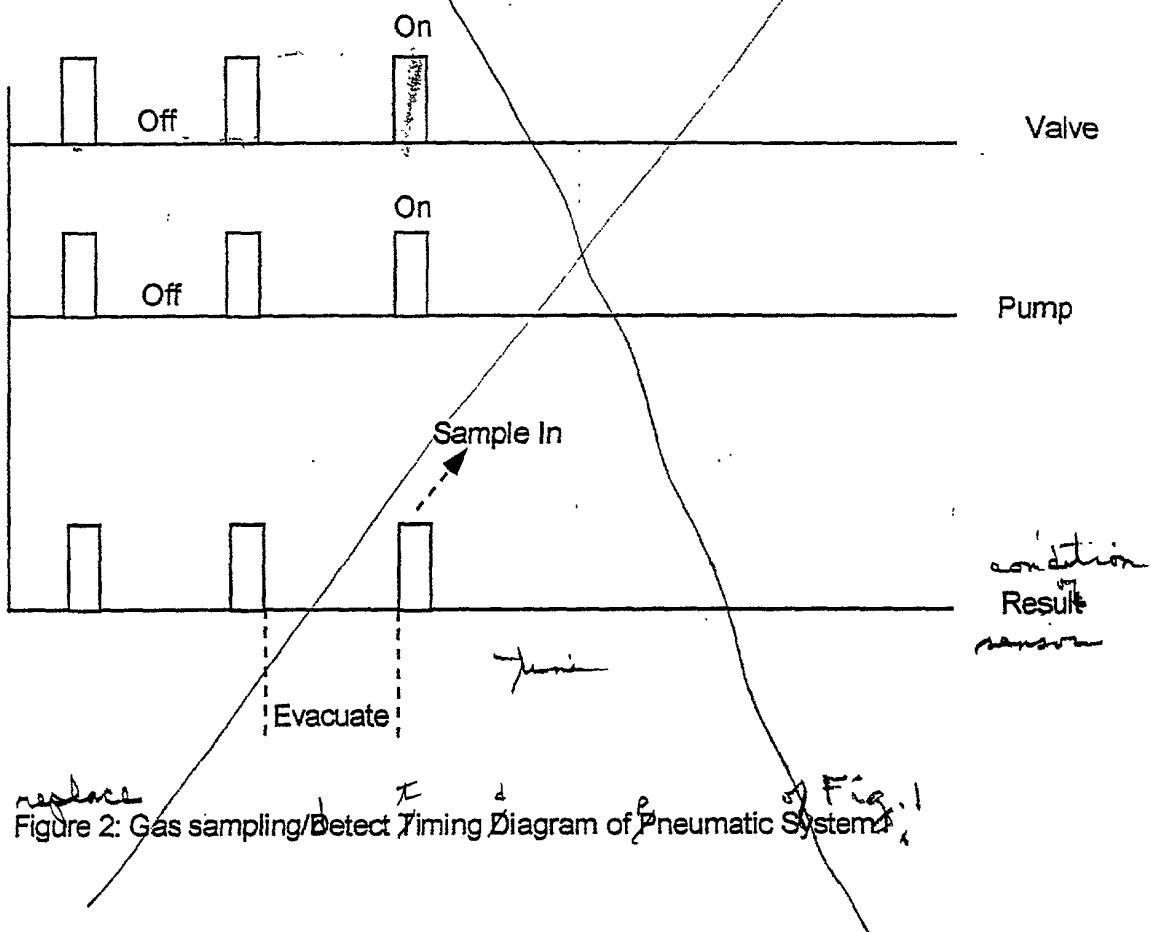
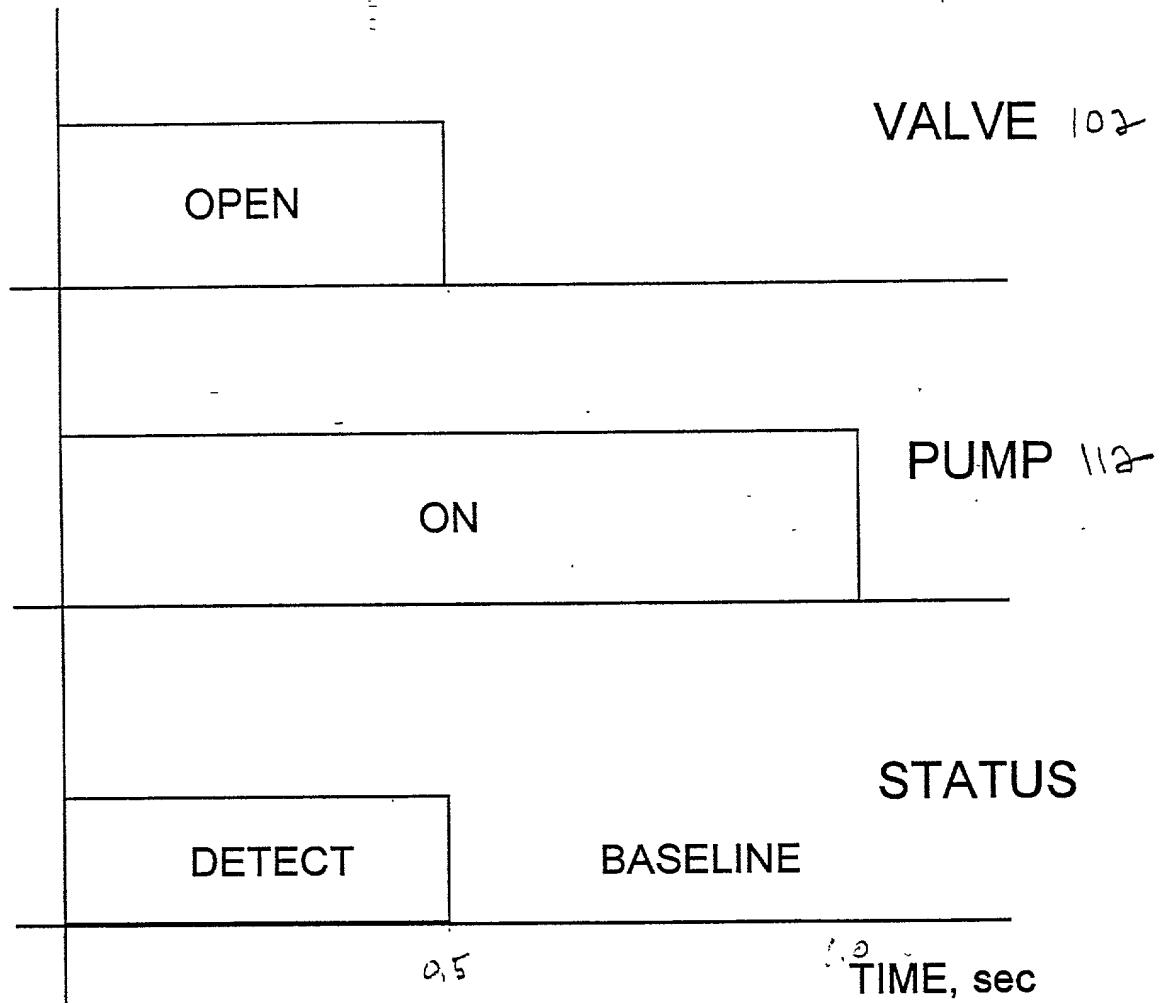


Figure 2: Gas sampling/Detect Timing Diagram of Pneumatic System

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Fig. 2



pump is always on

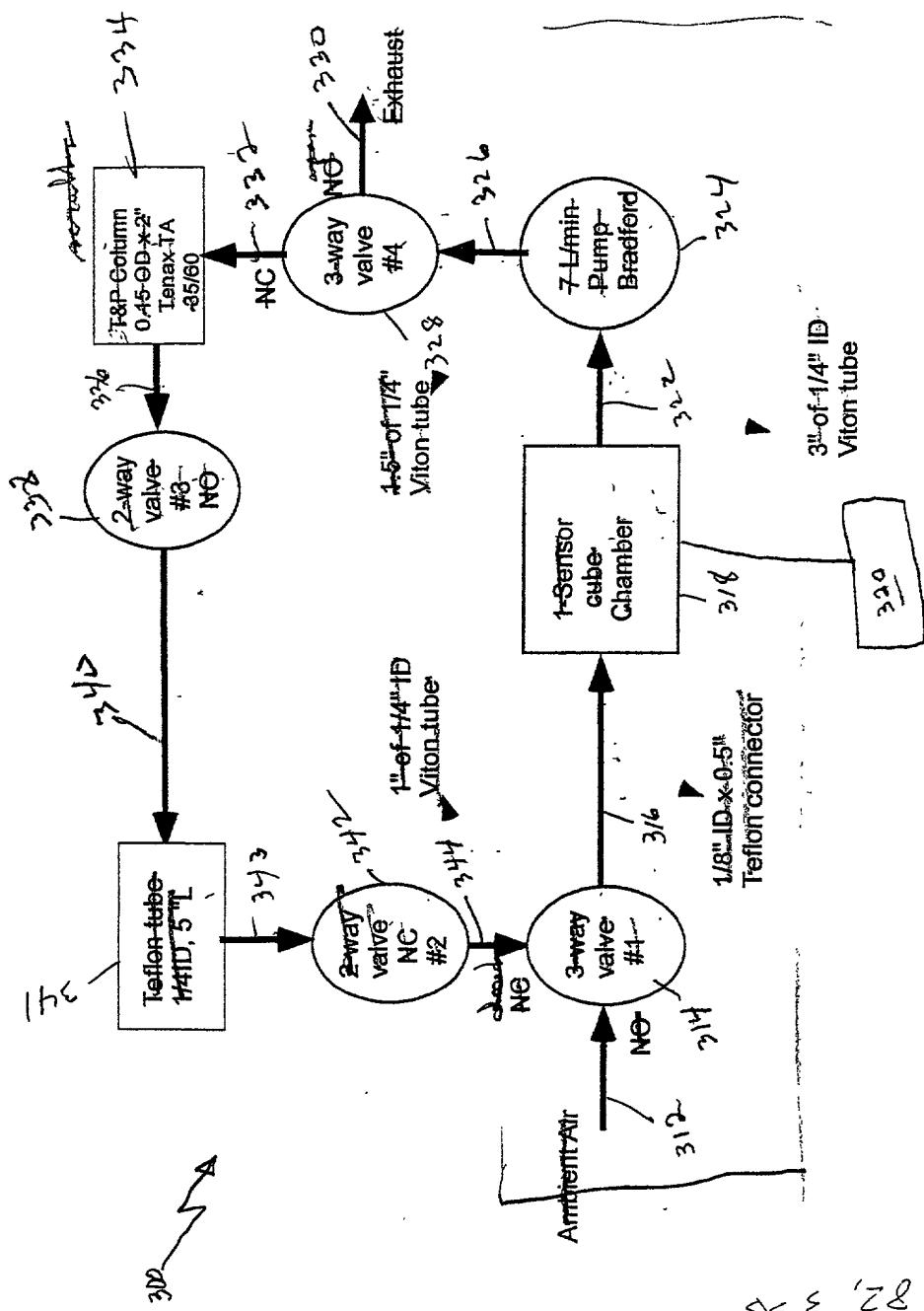


Figure 3: Impaired Evacuated Gas Sampling Pneumatic System-H, which results in rapid signal kinetics during and after vapor exposure

Valve #1 and
Pump (max Flow rate) on



Partial
evacuation

400

Valve
#2, #4 On

Complete
Evacuation

402

Valve #1 and
Pump (max Flow rate) on



404

Prior
Sampling

~~By Pump
Effect~~

~~By Evacuation
Effect~~

408

410

406

Sampling

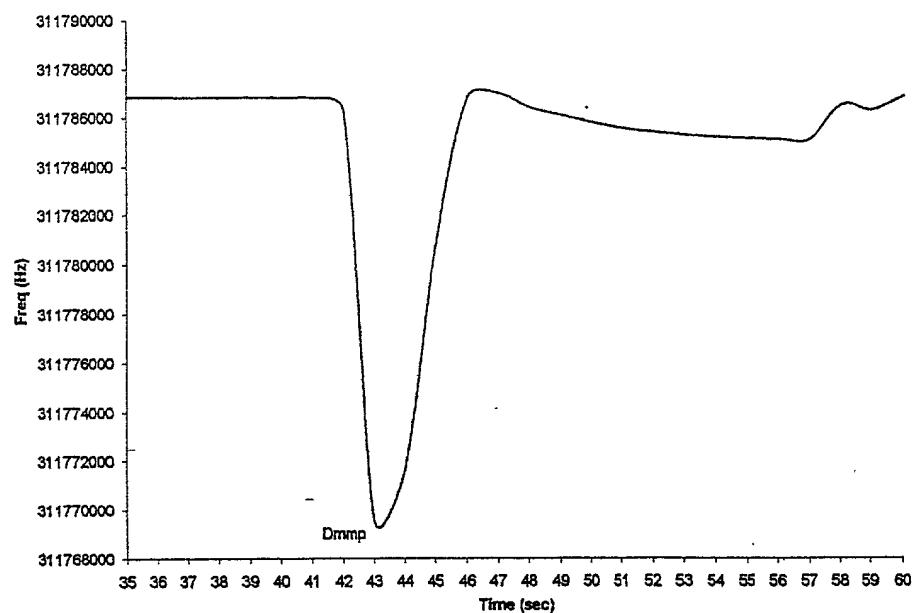
Time (Sec)

0 5 10 15 20

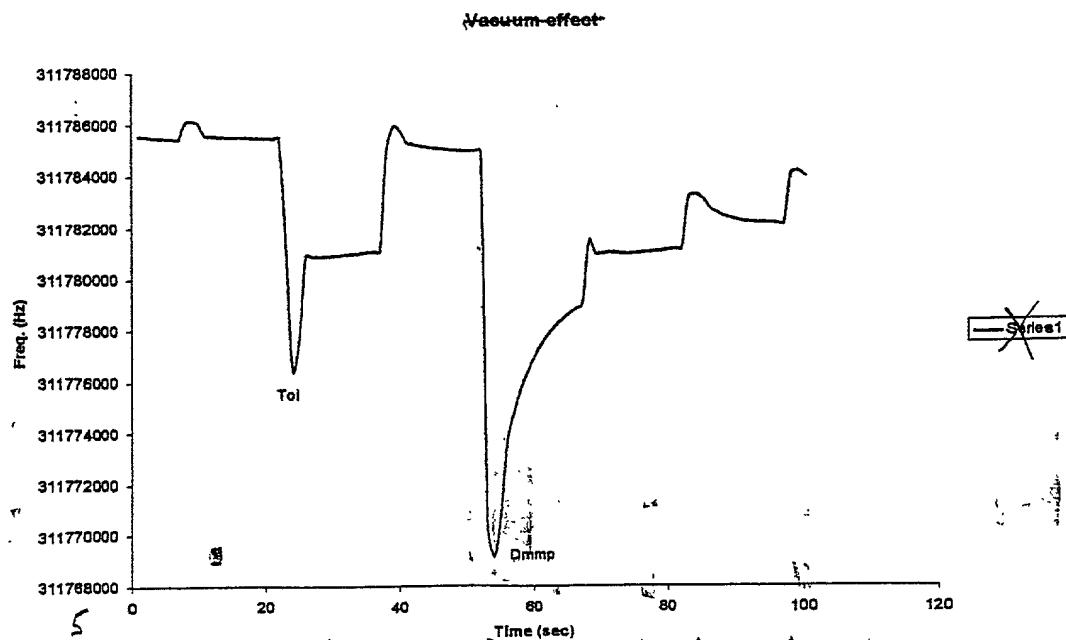
Figure 4: Gas Sampling/Detect Timing Diagram of pneumatic system II

~~the F is + ambient.~~

4

Combination of high flow and Vacuum

6
Figure 7. SAW Sensor Response Showing Fast Signal Response & Recovery Kinetics By Incorporating Pressure Modulated Pneumatics & Flow Through Purging



5
Figure 8. SAW Sensor Response Showing Fast Signal Response & Slow Recovery Kinetics By Incorporating Pressure Modulated Pneumatics Described In Figure 2